

# Series B-2T, B-2

25-42.5Amp • SCR/DIODE Modules

- Eight Standard Circuits
- For AC or DC Variable Voltage Output Up To 15KW

Modules come in eight standard circuits and are designed to control AC or DC variable voltage output up to 15KW. The package comes with standard .250 quick-connect terminals. All models have 2500 Vrms isolation and are UL recognized (file no. E72445). Optional isolation barriers are available.

Manufactured in Cynergy3's ISO 9001 Certified facility for optimum product performance and reliability.

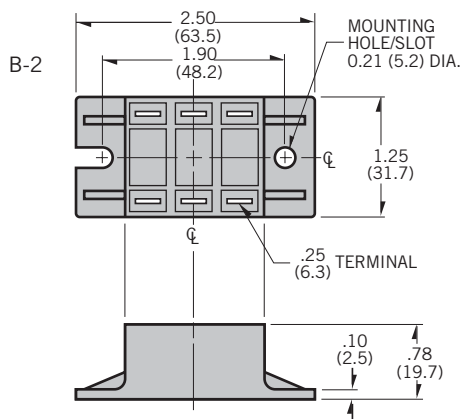
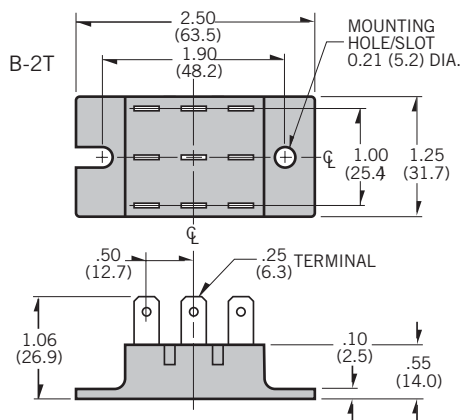
### PART NUMBER IDENTIFICATION

Series Type	Current	Circuit Type	AC Line Voltage	Options	Case Style
B-Case style	5 - 25 Amps	1 - 8	1 - 120 Vac	F - Free Wheeling Diode	-2T (Standard)
(Ceramic Base)	6 - 42.5 Amps	(see schematic diagrams)	2 - 240 Vac	(Circuits 1 & 2 Only)	-2 With Isolation Barriers
			3 - 280 Vac	SE - External Suppressor	
			4 - 480 Vac	(-2T Only, Circuits 1-6 Only)	

Example: B512FSE-2T

### MECHANICAL DIMENSIONS

All dimensions are in inches (millimeters)



ELECTRICAL SPECIFICATIONS		MODEL NO.	B5	B6
SYMBOL	SPECIFICATION		RATINGS	
$I_D$	Maximum DC Output Current ( $T_c = 85^\circ\text{C}$ )		25A	42.5A
$V_F$	Maximum Voltage Drop @ Amps Peak		1.65V @ 25A	1.6V @ 42.5A
$T_J$	Operating Junction Temperature Range		-40°C to +125°C	
di/dt	Critical Rate of Rise of On-State Current @ $T_J=125^\circ\text{C}$		100A/ $\mu\text{s}$	100A/ $\mu\text{s}$
dv/dt	Critical Rate of Rise of Off-State Voltage [V/ $\mu\text{s}$ ]		500V/ $\mu\text{s}$	500V/ $\mu\text{s}$
$V_{RMS}$	AC Line Input Voltage (Repetitive Peak Reverse Voltage)		120 ( $400V_{RRM}$ )	240 ( $600V_{RRM}$ )
			280 ( $800V_{RRM}$ )	480 ( $1200V_{RRM}$ )
$I_{TSM}$	Maximum Non-Repetitive Surge Current ( $1/2$ Cycle, 60Hz)		250A	600A
$I^2T$	Maximum $I^2T$ for Fusing ( $t=8.3\text{ms}$ ) [ $A^2\text{sec}$ ]		260	1500
$I_{GT}$	Maximum Required Gate Current to Trigger @ 25°C		60mA	80mA
$V_{GT}$	Maximum Required Gate Voltage to Trigger @ 25°C		2.5V	3.0V
$P_{G(AV)}$	Average Gate Power		0.5W	0.5W
$V_{GM}$	Maximum Peak Gate Voltage (Reverse)		5.0V	5.0V
$R_{qJC}$	Maximum Thermal Resistance Junction to Ceramic Base per Chip		0.9°C/W	0.7°C/W
$V_{ISOL}$	Isolation Voltage		2500 $V_{RMS}$	2500 $V_{RMS}$

### MECHANICAL SPECIFICATIONS

Weight: (typical) 1.5 oz. (42.5g)

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For recommended applications and more information contact:  
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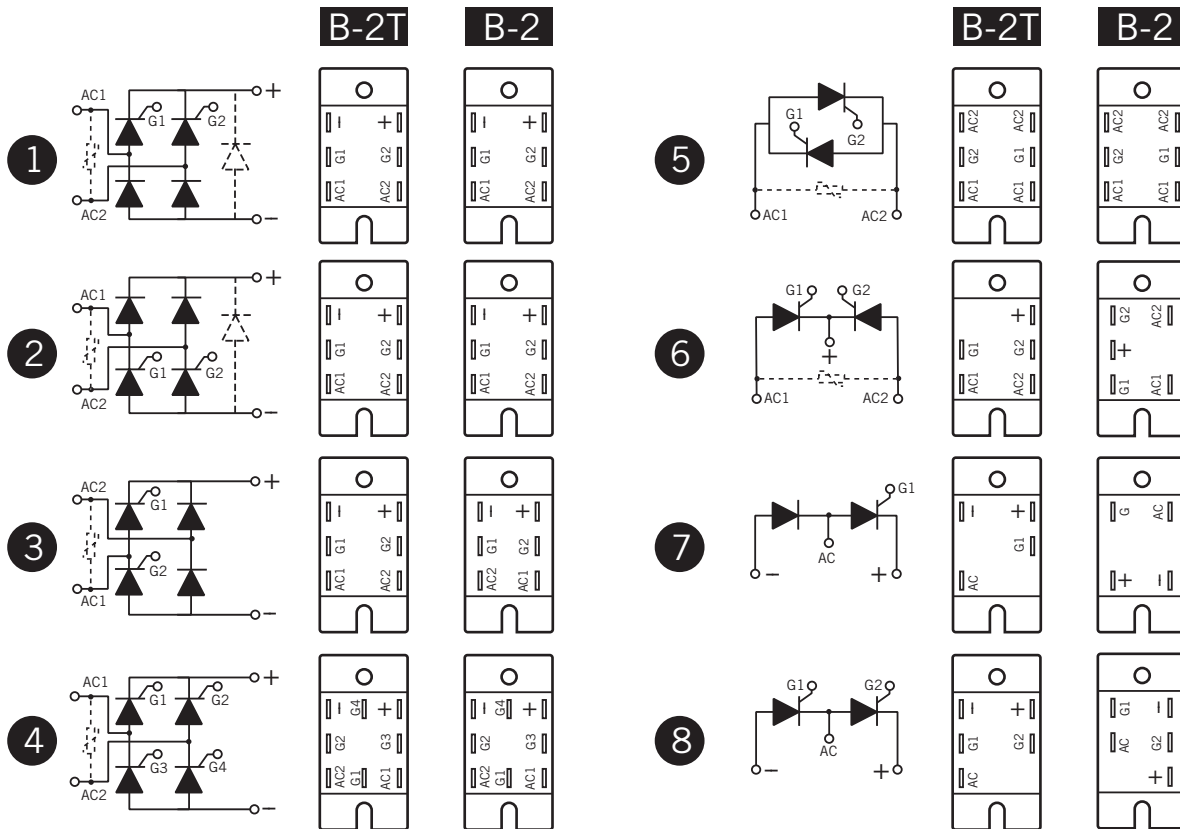
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Example: B512FSE-2T

### SERIES B-2T, B-2 CIRCUITS



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APPROVALS  
UL E72445

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